



National Transportation Safety Board Aviation Accident Final Report

Location:	KOTZEBUE, AK	Accident Number:	ANC96LA049
Date & Time:	04/17/1996, 1253 AKD	Registration:	N6282H
Aircraft:	Cessna 207	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

The pilot was departing a remote airport to begin a VFR cargo flight. The departure path took the airplane over ice covered terrain. The airport was considered to be below basic VFR conditions with light snow and fog, and the visual conditions in the area were considered to be 'flat' with the visibility from 2 to 3 miles. The pilot received a special VFR clearance out of the control zone by a flight service station specialist. After departure, witnesses observed the airplane climb to an estimated 500 feet above the ground and turn to the right. Shortly thereafter, the airplane banked to the right about 90 degrees, then descended to the ground in a wing and nose low attitude. A postaccident inspection of the airframe and engine did not reveal any mechanical malfunction.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: failure of the pilot to maintain sufficient altitude/clearance above terrain, after becoming spatially disoriented, while maneuvering after takeoff. Factors relating to the accident were: fog, snow, partial obscuration, 'flat' conditions of light, and the lack of a distinct horizon over ice/snow covered terrain.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) LIGHT CONDITION - OTHER
2. (F) WEATHER CONDITION - FOG
3. (F) WEATHER CONDITION - SNOW
4. (F) WEATHER CONDITION - OBSCURATION
5. (F) FLIGHT INTO ADVERSE WEATHER - PERFORMED - PILOT IN COMMAND
6. (F) VISUAL ILLUSION - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: MANEUVERING

Findings

7. MANEUVER - INITIATED - PILOT IN COMMAND
8. DESCENT - INADVERTENT - PILOT IN COMMAND
9. (F) TERRAIN CONDITION - WATER, FROZEN
10. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
11. (C) SPATIAL DISORIENTATION - PILOT IN COMMAND

Factual Information

On April 17, 1996, at 1253 Alaska daylight time, a wheel equipped Cessna 207, N6282H, collided with terrain about 3/4 mile northwest of Kotzebue, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country cargo flight under Title 14 CFR Part 135 when the accident occurred. The airplane, registered to and operated by Yute Air Inc., Anchorage, Alaska, was destroyed. The certificated commercial pilot, the sole occupant, received serious injuries. Instrument meteorological conditions prevailed. A VFR flight plan was filed and company flight following procedures were in effect. The flight originated at the Ralph Wien Memorial Airport, Kotzebue, at 1252.

The operator reported that the airplane had just departed Kotzebue with a special visual flight rules clearance (SVFR) en route to Selawik, Alaska. Witnesses indicated that flat lighting conditions existed at the airport. After departure, witnesses observed the airplane climbing to about 500 to 700 feet above the ground and then enter a 90 degree bank to the right. The airplane descended in a right wing and nose low attitude and struck ice covered terrain.

A Federal Aviation Administration (FAA) inspector from the Fairbanks Flight Standards District Office (FSDO) was in Kotzebue at the time of the accident and responded to the accident site. He reported that the airplane collided with offshore ice on a northerly heading. The airplane wreckage was documented by the inspector who indicated that the airplane came to rest inverted with the nose oriented toward the northeast. The right wing was folded over the top and trailing aft of the left wing. The engine separated from the fuselage and was located forward of the wreckage. Portions of the airplane were located along a wreckage path from the initial point of impact to the point of rest. Following the accident, the pilot did not have any recollection of being involved in an accident.

The FAA inspector performed a weight and balance calculation by examining the operator's records of the flight. Most of the cargo was strewn along the wreckage path, but the airplane's nose cargo compartment still contained all of its loaded cargo. The nose compartment has a limit of 120 pounds. At the wreckage site, the nose compartment contained 144 pounds of cargo. The FAA inspector reported that the total weight and balance limits for the airplane were not exceeded.

At 1251, a special weather observation at Kotzebue was reporting, in part: Sky condition and ceiling, sky partially obscured, 2,800 feet scattered, measured 5,000 overcast; visibility, 2 1/2 miles variable, light snow and fog; wind 310 degrees at 7 knots; altimeter, 29.41 inHg; remarks, snow covering 1/10 of the surface, visibility variable between 2 to 3 miles.

The Kotzebue airport is located in Class E airspace. The weather conditions were below basic VFR conditions and the Kotzebue Automated Flight Service Station (AFSS) was in control of the airspace. Audio tapes of radio conversations between the Kotzebue AFSS and airplanes operating in the Kotzebue control zone were reviewed.

At 1248:56, the pilot of the accident airplane requested a special VFR departure. The Kotzebue AFSS specialist replied there would be a 10 minute delay pending the arrival of several VFR airplanes into Kotzebue. At 1251:24, the pilot advised that if the first arriving airplane was not too close, he could maintain separation from the airplane. At 1251:37, the AFSS specialist issued a special VFR clearance out of the Kotzebue control zone to the accident airplane. The specialist did not specify to the accident airplane pilot or other arriving airplanes to maintain

visual separation from each other. There is no evidence that a loss of separation occurred between the accident airplane and the other arriving airplanes.

On April 30, 1996, the engine was examined at Sea Air Inc., Anchorage, Alaska. The examination revealed gear and valve train continuity. Thumb compression was evident in all cylinders. The magnetos produced spark at all cylinders. The left magneto was timed at 23 degrees before top dead center (BTDC) and the right magneto was timed at 24 degrees BTDC. The spark plug's massive electrodes exhibited a dry and grey appearance.

The engine driven fuel pump drive was intact and fuel was ejected from the body of the pump when the drive was hand rotated. The fuel metering unit inlet screen and the fuel manifold screen were both free of contaminants. The oil sump was crushed upward against the engine block and exhibited a longitudinal tear. The oil filter was free of any contaminants. The engine driven vacuum pump drive was intact but the pump could not be rotated by hand. Internal examination of the vacuum pump revealed the internal block was fractured. The individual vanes in the block were intact and moved within their respective slots.

Pilot Information

Certificate:	Commercial	Age:	27, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	09/01/1995
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	1815 hours (Total, all aircraft), 175 hours (Total, this make and model), 1639 hours (Pilot In Command, all aircraft), 195 hours (Last 90 days, all aircraft), 84 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N6282H
Model/Series:	207 207	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	20700465
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	03/25/1996, 100 Hour	Certified Max Gross Wt.:	3800 lbs
Time Since Last Inspection:	92 Hours	Engines:	1 Reciprocating
Airframe Total Time:	15367 Hours	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-520-F
Registered Owner:	YUTE AIR ALASKA	Rated Power:	300 hp
Operator:	YUTE AIR ALASKA	Operating Certificate(s) Held:	Commuter Air Carrier (135)
Operator Does Business As:		Operator Designator Code:	YAAA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	OTZ, 11 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1251 ADT	Direction from Accident Site:	124°
Lowest Cloud Condition:	Partial Obscuration / 0 ft agl	Visibility	0 Miles
Lowest Ceiling:	Overcast / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	-9° C / -11° C
Precipitation and Obscuration:			
Departure Point:	(OTZ)	Type of Flight Plan Filed:	VFR
Destination:	SELAWIK, AK (WLK)	Type of Clearance:	Special VFR
Departure Time:	1252 ADT	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	SCOTT R ERICKSON	Report Date:	09/19/1996
Additional Participating Persons:	DAVE SMITH; FAIRBANKS, AK DARYL CARLSON; ANCHORAGE, AK MICHAEL J GRIMES; LANCASTER, CA FRED LEEPER; WICHITA, KS		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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